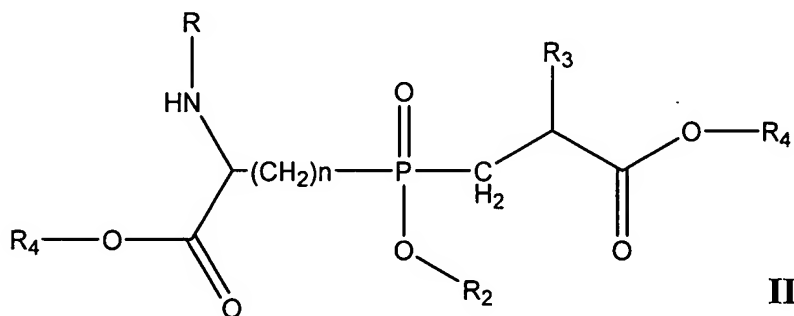


This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16. (Withdrawn)

17. (Currently Amended) A compound represented in the ~~general~~ formula (II):



wherein:

R represents a chelate ligand, a fluorescence tag, or a cytotoxic moiety;

R₃ represents an alkyl, an alkenyl, a cycloalkyl, a cycloalkenyl, an aryl, -(CH₂)_m-aryl, -alkyl-CO₂R₄, -alkenyl-CO₂R₄, -cycloalkyl-CO₂R₄, -cycloalkenyl-CO₂R₄ or -aryl-CO₂R₄;

R₂ and R₄, independently for each occurrence, represent hydrogen, a lower alkyl, or a pharmaceutically acceptable salt;

m is 1, 2, 3 or 4; and,

n is 0, 1, 2 or 3.

18-20. (Withdrawn)

21. (Currently Amended) The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein R is at least 25 amu in size.

22. (Original) The compound of claim 21, wherein R is at least 50 amu in size.

23. (Original) The compound of claim 22, wherein R is at least 100 amu in size.

24. (Original) The compound of claim 23, wherein R is at least 250 amu in size.

25. **(Currently Amended)** The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein ~~R is a cytotoxic moiety, and~~ R is hydrolyzable from the PSMA ligand.
26. **(Original)** The compound of claim 25, wherein R is linked to the rest of the molecule by use of an amide or ester group.
27. **(Original)** The compound of claim 25, wherein R is linked to the rest of the molecule by use of an acid labile or base-cleavable linker.
28. **(Currently Amended)** The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein R is a chelate moiety for chelating a metal.
29. **(Original)** The compound of claim 28, wherein R is a chelator for a radiometal or a paramagnetic ion.
30. **(Original)** The compound of claim 28, wherein R is a chelator for a radionuclide useful for radiotherapy or imaging procedures.
31. **(Currently Amended)** The compound of claim 30, wherein R said radionuclide is a beta- or alpha-emitter for radio-therapeutic use.
32. **(Currently Amended)** The compound of claim 30, wherein R said radionuclide is a gamma-emitter, positron-emitter, Auger electron-emitter, X-ray emitter or fluorescence-emitter.
33. **(Currently Amended)** The compound of claim 30, wherein R said radionuclide is ^{99m}Tc (technium).
34. **(Currently Amended)** The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein R is a radiosensitizing agent selected from: nitroimidazoles, metronidazole or misonidazole.
35. **(Currently Amended)** The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein R is a bifunctional chelator N_xS_y that are capable of coordinately binding a metal or radiometal, wherein x and y are integers between 1 and 4.
36. **(Original)** The compound of claim 35, wherein N_xS_y has a N₂S₂ or a N₃S core.
- ✓ 37. **(Currently Amended)** The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein R is said Boron addend is carborane.

38. (Currently Amended) The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein ~~R is a~~ said chemotherapeutic agent is: taxol; nitrogen mustards; ethylenimine derivatives; alkyl sulfonates; nitrosoureas; triazenes; pyrimidine analogs; purine analogs; vinca alkaloids; antibiotics; enzymes; platinum coordination complexes; substituted urea; methyl hydrazine derivatives; adrenocortical suppressants; or hormones and antagonists selected from: adrenocortisteroids (prednisone), progestins (hydroxyprogesterone caproate, medroprogesterone acetate and megestrol acetate), estrogens (diethylstilbestrol and ethinyl estradiol), antiestrogens (tamoxifen), or androgens (testosterone propionate and fluoxymesterone).
39. (Currently Amended) The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein ~~R is a drug that interferes with intracellular~~ said protein synthesis inhibitor is puromycin, cycloheximide, or ribonuclease.
- MO 40. (Currently Amended) The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein R is a prodrug that is only activated from its inactive precursor form by host metabolism.
41. (Currently Amended) The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein ~~R is a~~ said cytotoxic toxin is selected from: ricin, ricin A chain (ricin toxin), Pseudomonas exotoxin (PE), diphtheria toxin (DT), Clostridium perfringens phospholipase C (PLC), bovine pancreatic ribonuclease (BPR), pokeweed antiviral protein (PAP), abrin, abrin A chain (abrin toxin), cobra venom factor (CVF), gelonin (GEL), saporin (SAP), modeccin, viscumin or volkensin.
- A² 42. (Currently Amended) The compound of ~~any one of claims 1-5, 11, and 17-20~~, wherein ~~R is an~~ said enzyme that converts prodrug locally is alkaline phosphatase, and said prodrug is etoposidephosphate.
contd
43. (Currently Amended) A pharmaceutical composition comprising the compound of ~~any one of claims 1-5, 11, and 17-20~~, and a pharmaceutically acceptable carrier.
44. (Currently Amended) A method for detecting or imaging PSMA (prostate-specific membrane antigen) -expressing cells in a patient, comprising:
- (a) contacting the patient with a modified PSMA ligand of ~~any one of claims 1-5, 11, and 17-20~~;

- (b) detecting the modified PSMA ligand, thereby detecting PSMA-expressing cells in the patient.
45. **(Original)** The method of claim 44, wherein the PSMA-expressing cells are prostatic cells in prostatic hyperplasia or prostate cancer.
46. **(Original)** The method of claim 44, wherein the modified PSMA ligand is modified by an imaging agent.
47. **(Original)** The method of claim 46, wherein the imaging agent is a radionuclide imaging agent.
48. **(Original)** The method of claim 47, wherein the radionuclide imaging agent is radioactive iodine or indium.
49. **(Original)** The method of claim 44, wherein the modified PSMA ligand is detected by radioscintigraphy, magnetic resonance imaging (MRI), computed tomography (CT scan), or positron emission tomography (PET).
50. **(Original)** The method of claim 44, wherein the contacting step (a) is effected by administering to the patient the modified PSMA ligand.
51. **(Original)** The method of claim 44, wherein the detecting step (b) includes determining the volume, shape and/or location of PSMA-expressing cells in the patient.
52. **(Currently Amended)** A method for determining the abundance of PSMA in a sample, comprising:
- (a) contacting the sample with ~~any one of~~ the modified PSMA ligands of claims ~~1-5, 11, and 17-20~~;
- (b) determining the abundance of the modified PSMA ligands bound to PSMA, or the abundance of the modifying group of said bound ligands, thereby determining the abundance of PSMA in said sample.
53. **(Original)** The method of claim 52, wherein the sample is prostatic fluid, urine, or obtained from seminal plasma.
54. **(Original)** A method to diagnose, in a test sample, the presence of a prostate disease condition associated with PSMA-overexpression, comprising:

- (a) using the method of claim 52, determining the abundance of PSMA in the test sample and a normal control sample;
- (b) comparing the level of abundance of PSMA in the test sample and the control sample;

wherein statistically significant higher levels of abundance of PSMA in the test sample indicates the presence of a prostate disease condition associated with PSMA-overexpression.

- 55. **(Currently Amended)** A method to treat a patient suffering from a disease condition associated with PSMA-overexpression, comprising administering to the patient an effective amount of modified PSMA ligand of ~~any one of claims 1-5, 11, and 17-20~~.
- 56. **(Original)** The method of claim 55, wherein the disease condition is prostatic hyperplasia or prostate cancer.
- 57. **(Original)** The method of claim 55, wherein the modified PSMA ligand is modified by a cytotoxic agent.
- 58. **(Original)** The method of claim 55, wherein the modified PSMA ligand is modified by a radiometal chelating agent.
- 59. **(Original)** The method of claim 58, further comprising infusing into the patient an effective amount of chelator compounds.
- 60. **(Original)** The method of claim 59, wherein the chelator compound is EDTA or DTPA.
- 61. **(Original)** The method of claim 55, wherein the modified PSMA ligand is administered to the patient at a dose that contain 10-100 times less active agent as an active moiety than the dosage of agent administered as unconjugated active agents.
- 62. **(Currently Amended)** A kit for diagnosing or detecting the presence of a PSMA, comprising:
 - (a) at least one of the modified PSMA ligand of ~~any one of claims 1-5, 11, and 17-20~~;
 - (b) an instruction.

63. **(Original)** The kit of claim 62, wherein the modified PSMA ligand contains a chelate moiety for chelating a metal or a paramagnetic ion.
64. **(Original)** The kit of claim 63, further comprising at least one metal.
65. **(Original)** The kit of claim 64, wherein the metal is a radionuclide useful for radiotherapy or imaging procedures.
66. **(Withdrawn)**
67. **(New)** The compound of claim 17, wherein said cytotoxic moiety is a radiosensitizing agent, a Boron addend, a chemotherapeutic agent, a protein synthesis inhibitor, a prodrug activated by host metabolism, a cytotoxic toxin, an enzyme that converts prodrug locally, or a dye used in photodynamic therapy or in conjunction with appropriate non-ionizing radiation.
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